

II. AMENDMENTS TO THE DRAWINGS:

The attached two sheets of drawings includes changes to Figures 5(a) and 6(a). These two sheets, which include Figures 5(a), 5(b), 5(c), 6(a), 6(b) and 6(c), replaces the original two sheets including Figures 5(a), 5(b), 5(c), 6(a), 6(b) and 6(c). In Figures 5(a) and 6(a), minor typographical errors are corrected. No new matter has been added to the drawings by the present amendment.

Attachment: Two Replacement Sheets

Two Annotated Sheets Showing Changes

III. REMARKS

Applicant gratefully acknowledges the Examiner's determination that claims 1-15 contain allowable subject matter (Office Action, mailed March 12, 2008, at 6, lines 1-4).

As an initial matter, Applicant notes that the Examiner has refused to consider References "C" and "D" of the Information Disclosure Statement (IDS) filed September 26, 2005 on the grounds that Applicant did not provide the United States Patent and Trademark Office (USPTO) with a legible copy of these documents and/or information pertaining to why the documents were listed (See Office Action, mailed March 12, 2008, at 2, lines 4-9). The Examiner's allegations are erroneous because legible copies of document "C" are available via the USPTO's PAIRs database, and in particular, are available through the USPTO web page <https://sportal.uspto.gov/secure/myportal/privatepair> (See Exhibit A, filed herewith). In addition, Applicant previously filed a legible copy of the International Search Report corresponding to the above-captioned application as evident from Applicant's OIPE date-stamped filing receipt dated September 26, 2005 (See Exhibit B, filed herewith). However, Applicant files herewith another copy of the International Search Report to replace the one misfiled by the USPTO.

In view of the above facts, Applicant respectfully requests that the Examiner consider References "C" and "D" filed on September 26, 2005 with the Information Disclosure Statement (IDS) of the same date. The relevance of the International Search Report is evident on its face, and the relevance of Reference "C" is evident from the International Search Report.

With respect to Reference "C," which is the article by Norio Doi, *LFM o Tsukatta Kosoku in Memory XML Database Karearea*,¹ No. 21 (2002), pp. 24-27 (of record, hereafter the "Doi Document"), Applicant makes the following remarks. The Doi Document discloses

¹ Fast In-memory Database "Karearea" using LFM.

the following technique: (i) storage of XML using a Relational Database Management System (RDMS), (ii) a Native XML Database, and (iii) an XML Database named “Karearea,” which uses an LFM engine (See Doi Document, Sections 1, 2 and 3). The XML Database named “Karearea” disclosed by the Doi Document makes one element of XML data to be corresponding to one table, and expresses a parent-child relationship of the XML data as link information between tables (Doi Document, Section 3 on page 25, lines 3-9).

On the other hand, the present invention as presently claimed expresses a parent-child relationship to join tables by using another table (i.e., a join table). Attached herewith as “Exhibit C” is a document prepared by, or on behalf of Applicant, to illustrate the differences for the Examiner between the present invention and the subject matter disclosed by the Doi Document.

The drawings have been amended to address minor typographical errors.

With the present amendment, claims 3, 4, 8, 9, 12, 14 and 15 have been cancelled without prejudice, and claims 1, 2, 5-7, 10, 11 and 13 have been amended. Specifically, independent claims 1 and 6 have been amended to improve grammar and clarity, and to recite

“(e) in the case where value lists contained in specified information blocks are equalized with each other in the selected two table-format data, generating a master-side projection array for the master table-format data, wherein the master-side projection array is formed by summing up the number of times of duplication of each line, and generating a master-side ordered set for the master table-format data and also a slave-side projection array for the slave table-format data, wherein the slave-side projection array is formed by summing up the number of times of duplication of each line in a join table, and generating a slave-side ordered set for the slave table-format data, wherein the slave-side ordered set is sorted by entry used as a key for joining;

(f) repeating steps (b), (c), (d) and (e), and when there is a table to be joined with the slave table-format data of the two table-format data, using the slave table-format data as master table-format data;

(g) generating a reverse mapping array between one join table and a subsequent join table using the master-side projection array as an original array for the subsequent join table;”

wherein step (e) is supported on page 20, lines 14-19, and on page 22, lines 1-7, and step (g) is supported on page 24, line 23, to page 25, line 3, of Applicant's specification as originally filed. Step (f) is supported on page 23, line 4, to page 24, line 22, of Applicant's specification as originally filed.

Claims 1 and 6 have also been amended to recite

“(j) initializing a current depth to a depth of the table-format data to be the root of the tree structure;

(k) specifying a record in the master-side ordered set for the join table corresponding to the current depth, and arranging a value indicating the record together with the depth into the area for the tree description table;

(l) acquiring an element in the master-side ordered set for the subsequent join table by tracing the slave-side projection array and the slave-side ordered set corresponding to the master-side ordered set for the join table on the current depth, as well as, when present, the reverse mapping array and the master-side projection array for the subsequent join table; and

(m) repeating steps (k) and (l) with sequentially searching in the direction of the depth until no further elements are acquired,”

wherein steps (j) and (k) are supported on page 26, line 19, to page 27, line 3, and step (l) is supported on page 27, lines 4-18, and step (m) is supported on page 29, line 11, to page 31, line 14, of Applicants' specification as originally filed.

Furthermore, the preamble of independent claim 6 has been amended to recite a “memory device storing a program for connecting a plurality of table-format data... the program characterized by causing a computer operably connected to the memory device to execute the steps of...” as supported on page 16, lines 3-25, of Applicant's specification as originally filed. The preambles of claims 7, 10, 11 and 13, which all depend directly or indirectly on claim 6, have been amended in accordance with the amendment to the preamble of claim 6.

Claims 2 and 7, which depend on claims 1 and 6, respectively, have been amended to recite “in step (g) the reverse mapping array is omitted when the whole set of the table-format

data is used” as supported on page 41, lines 18-21, of Applicant’s specification as originally filed.

The present amendment adds no new matter to the above-captioned application.

A. The Rejections

Claim 6 stands rejected under 35 U.S.C. § 101 for allegedly failing to recite statutory subject matter.

Claims 1 and 6 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite.

In view of the present amendment, Applicant respectfully traverses the rejections and requests reconsideration of the above-captioned application for the following reasons.

B. Applicant’s Arguments

In view of the present amendment, claims 1, 2, 5-7, 10, 11 and 13 are now in compliance with 35 U.S.C. § 112.

With respect to the Section 101 rejection, independent claim 6 now recites a

“memory device storing a program for connecting a plurality of table-format data...the program characterized by causing a computer operably connected to the memory device to execute the steps of...,”

which is statutory subject matter (i.e., an apparatus or article of manufacture) falling within the scope of 35 U.S.C. § 101.

III. CONCLUSION:


Claims 1, 2, 5-7, 10, 11 and 13 are now in compliance with 35 U.S.C. §§ 101 and 112. As conceded by the Examiner, claims 1, 2, 5-7, 10, 11 and 13 are distinguished over the prior art.

For all of the above reasons, claims 1, 2, 5-7, 10, 11 and 13 are in condition for allowance, and a prompt notice of allowance is earnestly solicited.

The below-signed attorney for Applicant welcomes any questions.

Respectfully submitted,

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